

IN THE SPECIFICATION:

Applicants request that the title that is on the International Application be amended to SINGLE LENS ELEMENT, LIGHT SOURCE DEVICE AND SCANNING OPTICAL DEVICE, as shown on the English Translation and Declaration.

Please insert the following new paragraph after the Title and before the "TECHNICAL FIELD":

-- RELATED APPLICATION

This application is the U.S. National Phase under 35 U.S.C. § 371 of International Application No. PCT/JP2004/013498, filed on September 9, 2004, which in turn claims the benefit of Japanese Application No. 2003-316365, filed on September 9, 2003, the disclosures of which Applications are incorporated by reference herein. —

Please amend the paragraph beginning on page 5 at line 11 as follows:

In order to achieve the above object, a ~~light source device~~ scanning optical device according to a third aspect of the present invention is: a scanning optical device for imaging and scanning a bundle of rays on a surface to be scanned as a spot, comprising:

Please amend the paragraph beginning on page 10 at line 8 as follows:

A single lens element appropriate for a scanning optical ~~system~~ device can be provided when the single lens element is designed in accordance with the above range. Furthermore, it is more preferable that the single lens element satisfies the following range.

Please amend the paragraph beginning on page 10 at line 18 as follows:

In a case where both sides of the single lens element 1 are aspherical surfaces, it is preferable that the following expression (7) (9) is satisfied.

Please amend the paragraph beginning on page 10 at line 22 as follows:

When the focal length of the single lens element is within this range, it is possible to obtain a lens system appropriate for the scanning optical system device.

Please amend the paragraph beginning on page 10 at line 25 and bridging page 11 as follows:

In a case where both sides of the single lens element 1 are aspherical surfaces, it is preferable that the following expression (8) (10) is satisfied.

Please amend the paragraph beginning on page 11 at line 4 as follows:

If a center thickness is within this range, and when $[[t]] \leq$ satisfies the above expression, it is possible to obtain sufficient edge thickness difference, thus even when directly adhered to the optical base without using a lens barrel, the single lens element is less subjected to an influence of distortion by an adhesive.

Please amend the paragraph beginning on page 11 at line 9 as follows:

In a case where both sides of the single lens element 1 are aspherical surfaces, it is preferable that the following expression (9) (11) is satisfied.

Please amend the paragraph beginning on page 11 at line 16 as follows:

In a case where both sides of the single lens element 1 are aspherical surfaces, it is preferable that the expression [(4)] (5) is within the following range.

Please amend the paragraph beginning on page 23 at line 14 as follows:

Furthermore, it is preferable that the semiconductor laser element 41 satisfies the following expressions.

$$775 \text{ nm} < \lambda < 810 \text{ nm} \quad (16) (17)$$

$$640 \text{ nm} < \lambda < 680 \text{ nm} \quad (17) (18)$$

Please amend the paragraph beginning on page 24 at line 15 and bridging pages 25 and 26 as follows:

A bundle of beam from a semiconductor laser element 51 is converted to parallel rays, convergent rays or divergent rays by a single lens element 52, and enters into a cylindrical lens 53. In a vertical scanning direction, the bundle of beam is converged in the neighborhood of a reflecting surface of a polygon mirror 54. Here, the single lens element 52 has the same structure as that of the single lens element described in Embodiment 1. The polygon mirror 54 rotates upon a rotation central axis, and deflects an incident bundle of rays to be converged and scanned on a photoconductor drum 56 by an f-θ lens 55. The f-θ lens 55 is arranged such that a deflection point and a scanning surface on the photoconductor drum 56 are optically conjugated in the vertical scanning direction, and corrects a face tangle of the polygon mirror 54, and also corrects a curvature of field and a f-θ characteristic. In addition, the semiconductor laser element 51 and the single lens element 52 are fixed on an optical base 57. In the present structure, since

the single lens element according to Embodiment 1 is employed as a single lens element, even as the single lens element [[51]], a stable performance against temperature is obtained. Thus, in comparison with a conventional optical system which configures a stable optical system against temperature by using a plurality of lenses, lenses from a light source to the cylindrical lens 53 are simplified, and miniaturization and cost reduction can be accomplished. In addition, since the semiconductor laser 51 and the collimate lens 52 comprising the single lens element of the present invention are directly fixed on the common optical base, a temperature difference is reduced, and a temperature compensation effect of the lens is sufficiently obtained. Furthermore, the semiconductor laser element is generally a heat generation source whose temperature rises when a power is supplied to a device, thus having a temperature difference with the lens. Therefore, it is more preferable that the temperature difference is further reduced by providing a radiator plate 58 or the like to the semiconductor laser element for mitigating rise in temperature. In addition, though in the present example there is described a configuration of only having the semiconductor laser 51 and the collimate lens 52 placed on the optical base, it is not limited thereto, and the configuration may further have the cylindrical lens 53 and the f-θ lens 55 placed on the optical base. Furthermore, it is needless to say that a configuration having each lens provided on a body of the scanning optical system also serves a purpose of the present invention.